

Claims

1 1. A method of inducing tolerance in a recipient
2 mammal of a first species to a tissue obtained from a mammal
3 of a second species, which tissue expresses an MHC antigen,
4 said method comprising

5 inserting DNA encoding an MHC antigen of said second
6 species into a bone marrow hematopoietic stem cell from
7 said recipient mammal, and

8 allowing said MHC antigen encoding DNA to be
9 expressed in the recipient.

1 2. The method of claim 1, wherein said cell is
2 removed from said recipient mammal prior to said insertion
3 and returned to said recipient mammal after said insertion.

1 3. The method of claim 1, wherein said recipient is
2 a human.

1 4. The method of claim 1, wherein said mammal is a
2 swine.

1 5. The method of claim 4, wherein said swine is a
2 miniature swine.

1 6. The method of claim 1, wherein said DNA is
2 obtained from the individual mammal from which said tissue
3 is obtained.

1 7. The method of claim 1, wherein said DNA is
2 obtained from an individual mammal which is syngeneic to the
3 individual mammal from which said tissue is obtained.

1 8. The method of claim 1, wherein said DNA is
2 obtained from an individual mammal which is MHC identical to
3 the individual mammal from which said tissue is obtained.

1 9. The method of claim 1, wherein said DNA
2 comprises an MHC class I gene.

1 10. The method of claim 1, wherein said DNA
2 comprises an MHC class II gene.

1 11. The method of claim 1, wherein said DNA is
2 inserted into said cell by transduction.

1 12. The method of claim 11, wherein said DNA is
2 inserted into said cell by a retrovirus.

1 13. The method of claim 12, wherein said DNA is
2 recipient is a human and said retrovirus is a Moloney-based
3 retrovirus.

1 14. A method of inducing tolerance in a recipient
2 mammal to a tissue obtained from a donor mammal of the same
3 species, which tissue expresses an MHC antigen, said method
4 comprising

5 inserting DNA encoding an MHC antigen of said donor
6 into a bone marrow hematopoietic stem cell from said
7 recipient mammal, and

8 allowing said MHC antigen encoding DNA to be
9 expressed in the recipient.

1 15. The method of claim 14, wherein said cell is
2 removed from said recipient prior to said insertion and
3 returned to said recipient after said insertion.

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1 21. The method of claim 20, wherein said retrovirus
2 is a Moloney-based retrovirus.